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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,227	12/02/2003	Mark Jackson Pulver	PEA27US	4605
24011 7590 04/11/2007 SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			EXAMINER MRUK, GEOFFREY S	
			ART UNIT	PAPER NUMBER
			2853	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/11/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/727,227

Applicant(s)

JACKSON PULVER ET AL.

Examiner

Geoffrey Mruk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,20,21 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,20,21,24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 February 2007 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 states, "wherein the integrated circuit comprises a plurality of reticle exposed areas stitched in sequential arrangement, the nozzle rows being defined across the stitch parts." Applicant seems to be claiming features within the integrated circuit, i.e. logic circuitry and pads. However, the examiner is not sure to what the metes and bounds of the claimed invention is since the

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written description at paragraphs 4243 to 4355 and 4367 to 4370 fail to describe the final CMOS/MEMS structure as a result of the process steps disclosed. Paragraphs 4243 to 4355 merely add an aggregate listing of printing terminology. Further, the specification does not provide a figure showing the final CMOS/MEMS structure.

Therefore, based upon an inadequate disclosure, one of ordinary skill in the art would not be able to ascertain the final integrated circuit structure or the arrangement of the areas once the reticle layout is removed.

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 states, "wherein the integrated circuit comprises a plurality of reticle exposed areas stitched in sequential arrangement, the nozzle rows being defined across the stitch parts." Applicant seems to be claiming process steps for exposing areas on a chip. However, the examiner is not sure to what the metes and bounds of the claimed invention is since the written description at paragraphs 4367 to 4370 fail to describe the details of each process step. Further, figure 323 fails to label the "top" and "bottom" of each respective area. Therefore, one of ordinary skill in the art would not be able to make an integrated circuit with the disclosed process steps.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. Claim 1 recites the limitation "wherein the integrated circuit comprises a plurality of reticle exposed areas stitched in sequential arrangement, the nozzle rows being defined across the stitch parts." There resides no the final CMOS/MEMS structure in the claims that determines what is included and not included in the invention. Therefore, one of ordinary skill in the art would not be able to ascertain the metes and bounds of the term "wherein the integrated circuit comprises a plurality of reticle exposed areas stitched in sequential arrangement, the nozzle rows being defined across the stitch parts."
2. Claims 20, 21, and 24 are rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a claim with the above addressed 35 U.S.C. 112 problems (i.e. claim 1).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Jarrold et al.  
(US 2002/0093548 A1).

With respect to claim 1, Jarrold discloses a printhead integrated circuit incorporating microelectromechanical inkjet nozzle systems (MEMS) arranged in a plurality of nozzle rows, wherein the integrated circuit comprises a plurality of reticle exposed areas (Fig. 1, element 12) stitched in sequential arrangement, the nozzles (Fig. 1, element 18) being defined in the stitched parts (paragraphs 0004, 0047).

***Response to Arguments***

Applicant's arguments filed 10 December 2006 have been fully considered but they are not persuasive. The applicant's argument that "It is respectfully submitted that above-discussed amended claim 1 complies with both the written description and enablement requirements as it clearly recites the structure of the printhead integrated circuit described, for example, in the sections entitled "BILITHIC PRINTHEADS" and "CMOS SUPPORT ON BILITHIC PRINTHEAD" of the present specification" is not

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persuasive. As stated in the instant rejection, paragraphs 4243 to 4355 merely add an aggregate listing of printing terminology. Second, the specification does not provide a figure showing the final CMOS/MEMS structure while the written description at paragraphs 4367 to 4370 fail to describe the details of each process step. Further, the applicant admits "With respect to the term "stitch" used in amended claim 1, it is respectfully submitted that one of ordinary skill in the art clearly understands this term with respect to reticle images for forming integrated circuits."

Therefore, based upon an inadequate disclosure, one of ordinary skill in the art would not be able to ascertain the final integrated circuit structure, the arrangement of the first and second areas once the reticle layout is removed, and be able to make an integrated circuit with the disclosed process steps.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is (571) 272-2810. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GSM  
4/6/2007

GM



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SUPERVISORY PATENT EXAMINER